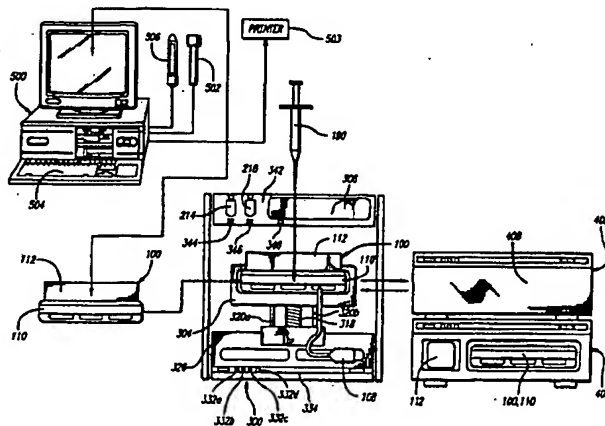




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(54) Title: APPARATUS AND METHOD FOR MAINTAINING AND GROWING BIOLOGICAL CELLS



(57) Abstract

An apparatus and related method are disclosed, for receiving, maintaining and growing biological cells *ex vivo* within a portable cassette, without exposing the cells to the external environment. The portable cassette is used in combination with a processor instrument that facilitates an initial inoculation of the cassette with cells of the kind to be grown and to distribute those cells in a predetermined pattern (e.g., uniformly) throughout a cell growth chamber. Thereafter, the portable cassette is used in combination with an incubator instrument that incubates the cell growth chamber so that the cells are optimally expanded. The same processor instrument then is used to harvest the expanded cells from the portable cassette. Both instruments are configured to condition the portable cassette during stages of the cell growth process, without disturbing the cassette's sterile system. In addition, an updatable memory device associated with the cassette stores significant information about the cassette and its condition during the various steps of the cell growth process. Such information is useful both for subsequent archival purposes and for facilitating a resumption of the cell growth process in the event of any instrument failure or significant alarm condition.